



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,866	09/29/2006	Dirk Schmidt	FMW-CT-PCT-US	8169
28862	7590	01/06/2011	EXAMINER	
HUDAK, SHUNK & FARINE, CO., L.P.A.			CHAU, TERRY C	
2020 FRONT STREET			ART UNIT	PAPER NUMBER
SUITE 307				3655
CUYAHOGA FALLS, OH 44221			MAIL DATE	DELIVERY MODE
			01/06/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,866	Applicant(s) SCHMIDT ET AL.
	Examiner TERRY CHAU	Art Unit 3655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 August 2010.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-21 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 29 September 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTC-94)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

This is the first office action for the continued examination of application 10/594,866 filed 9/26/2006.

Applicant's amendment to the claims filed 8/2/2010 has been entered. The previous objection to claim 20 is withdrawn in view of applicant's amendment. Claims 1-21 are currently pending.

Applicant's amendment to the specification filed 8/2/2010 has been entered. The previous objection to the specification is withdrawn in view of applicant's amendment.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/2/2010 has been entered.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 4/10/2009 and 9/29/2006 have been considered by the examiner.

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show the engine control mechanism as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1 and 21, the grease reservoir permanently connected by a lubricating line to the closing hook was not described in the originally filed specification. The fact that the grease reservoir is a grease cartridge would imply that the grease reservoir is not permanently connected, since a "cartridge" is defined as a small modular unit designed to be inserted into a larger piece of equipment. "Cartridge" has the connotation of being removable. For example, ink cartridges and ammunition cartridges are generally replaceable when spent.

Riskedal (US 6,874,599) was included in the previous rejection of claim 1 in view of applicant usage of the term "cartridge". Given the applicant's position that the

cartridge may be permanently attached, a new 103 rejection without the teachings of Riskedal is provided below.

Claims 2-20 are rejected as being dependent upon rejected claim 1.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9, 10 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 9 and 20, the variable control mechanism (11) does not comprise a valve control mechanism (12). See figure 1. The variable control mechanism and valve control mechanism appear to be two separate entities.

Claim 10 is rejected as being dependent upon rejected claim 9.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 14, 15, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rockinger Spezialfabrik fur Anhaenger Kupplungen GmbH &

Co (DE 94 01 718; herein referred to as Rockinger; see translation attached) in view of Heinzel (DE 43 04 857), and Elyakim (US 4,477,100).

Rockinger discloses:

Regarding claim 1:

A system for lubricating a closing mechanism on fifth wheels comprising:

a closing mechanism (53) arranged on a bottom side of a coupling plate, having at least one closing hook (53b) or closing bar (53c) or a combination thereof, and a grease reservoir (implicit reservoir forming the central lubricant supply connected to line 65; see page 9, paragraph 9-10), which is permanently connected by a lubricating line (65; see figure 10) solely to the closing hook.

Regarding claim 1, Rockinger does not disclose that the closing hook is provided with a permanent coating and that the coating of the closing hook or closing bar or both is configured as a sliding coating; and the grease reservoir is a cartridge, with the grease cartridge arranged on the fifth wheel.

Heinzel discloses a fifth wheel assembly (see figure 1) with a sliding coating (see paragraph 11, page 3 of the machine translation) on the surfaces (29, 31) of the closing hook (18) and closing bar (16). The sliding coating, similar to the sliding coating on receptacle (34), may consist of a hard layer, a PTFE layer, and an optional adhesion layer (see paragraphs 2-8, page 3 of the machine translation).

Elyakim discloses a grease reservoir / grease cartridge (13) arranged on a fifth wheel (see figure 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a sliding coating on the closing hook and closing bar Rockinger in view of the teachings of Heinzel that a sliding coating can drastically reduce lubricant consumption (see paragraph 12, page 1 of the machine translation).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the grease reservoir as a grease cartridge and to arrange the grease cartridge on the fifth wheel in view of the teachings of Elyakim and since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70. One of ordinary skill at the time the invention was made would recognize that placing the grease reservoir / cartridge on the fifth wheel of Rockinger would reduce the length of the lubricating line, thereby reducing the amount of materials used in constructing the lubricating line and pressure drops across the lubricating line.

Regarding claim 2, the grease cartridge is coordinated with the fifth wheel.

Regarding claim 3, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place the grease cartridge underneath the fifth wheel, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Regarding claims 4, the grease cartridge has a drive unit (14 of Elyakim).

Regarding claim 14, at least one outer surface of the closing hook is provided with the sliding coating (see paragraph 11, page 3 of the machine translation for Heinzel), wherein the coating is in the form of the sliding coating.

Regarding claim 15, the sliding coating consists of a multilayer system (see paragraphs 2-8, page 3 of the machine translation of Heinzel)

Regarding claims 17 and 18, the sliding coating of Heinzel has a layer thickness of 50 to 150 µm; the sliding coating has a layer thickness of 70 to 130 µm. (A *prima facie* case of obviousness exists due to an overlap of ranges. See paragraphs 7-9 and 14, page 2 of the translation. The thickness of the sliding coating ranges, which includes all three layers, ranges from 40 to 370 µm.)

Regarding claim 19, at least one outer surface of the closing bar of Rockinger as modified by Heinzel is provided with the sliding coating, wherein the coating is in the form of the sliding coating.

Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rockinger (DE 94 01 718), Heinzel (DE 43 04 857) and Elyakim (US 4,477,100), as applied to claim 4 above, and further in view of Oloman et al. (US 5,968,325).

The teachings of Rockinger, Heinzel and Elyakim have been discussed above.

Regarding claims 5 and 6, Rockinger, Heinzel, and Elyakim do not disclose that the drive unit comprises an electromechanical drive or a chemical drive.

Oloman et al. discloses a grease cartridge with a chemical and electromechanical drive (see Field of Invention).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the drive unit of Rockinger as modified by Elyakim with an electromechanical / chemical drive unit in view of the teachings of Oloman that the

Art Unit: 3655

chemical / electromechanical drive is an automatic drive (see Field of Invention), and since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192.

A first interpretation of claim 7 is provided below.

Regarding claims 7 and 8, the drive unit is connected to a variable control mechanism (pressure sensor; see column 4, lines 6-9 of Oloman). The variable control mechanism comprises an engine control mechanism as the variable control mechanism would be controlling the drive unit which is considered to be an engine.

A second interpretation of claim 7 is provided below.

Regarding claims 7, 9 and 10, the drive unit is (indirectly) connected to a variable control mechanism (14 of Oloman). The variable control mechanism comprises a valve control mechanism (14 of Oloman). The valve control mechanism comprises a flow restriction valve (14 of Oloman) arranged in the lubricating line.

Claims 11-13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rockinger (DE 94 01 718), Heinzel (DE 43 04 857), and Elyakim (US 4,477,100) and Oloman et al. (US 5,968,325) , as applied to the first rejection of claim 7 above, and further in view of Schedratl et al, (US 5,438,881).

The teachings of Rockinger, Heinzel, Elyakim, and Oloman have been discussed above.

Regarding claims 11-13, Rockinger, Heinzel, Elyakim and Oloman do not disclose that the variable control mechanism communicates with a vehicle control unit / a coupling control unit / a pressure sensor arranged on the coupling plate.

Schedratl et al. discloses a fifth wheel (1) with a pressure sensor (10) arranged on the coupling plate (2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to connect the variable control mechanism of the drive unit of Oloman to a vehicle control unit / a coupling control unit / a pressure sensor arranged on the coupling plate in view of the teachings of Oloman et al. and Schedratl et al. that the pressure measurements may be used to influence and improve the driving behavior of the vehicle, especially the behavior of a lubricant distributor (see column 4, lines 6-9 of Oloman et al. and the abstract and column 3, lines 6-14 of Schedratl et al.).

Regarding claim 20, see the rejections of claims 3, 5, 7-13.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rockinger (DE 94 01 718), Heinzel (DE 43 04 857) and Elyakim (US 4,477,100), as applied to claim 15 above, and further in view of Sedlatschek et al. (US 3,844,729).

The teachings of Rockinger, Heinzel and Elyakim have been discussed above.

Heinzel also discloses that the multilayer system is composed of a first layer, which comprises an alloy with molybdenum and a second layer of PTFE applied to the first layer (see paragraph 4-9, page 2 of the translation).

Regarding claim 16, Rockinger, Heinzel, Riskedal and Elyakim do not disclose that the first layer comprises an iron alloy with nickel and molybdenum fraction.

Sedlatschek et al. discloses a wear-resistant surface for a metallic machine element that is applied by plasma spraying (see lines 10-28, column 3). The wear-resistant surface comprises an iron alloy with nickel and molybdenum fraction (see lines 45-65, column 2). Furthermore, PTFE may be applied to the wear-resistant surface (see lines 14-19, column 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include iron and nickel with molybdenum alloy in the multilayer system of the slide coating of Rockinger as modified by Heinzel in view of the teachings of Sedlatschek et al. that a wear surface made from such an alloy is capable of withstanding large stresses and friction, and provides for a sliding contact that may operate at elevated temperatures under conditions of inadequate lubrication (see lines 21-25, column 2).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rockinger (DE 94 01 718) in view of Heinzel (DE 43 04 857), and Elyakim (US 4,477,100) and Schneider (DE 41 10 893).

Regarding claim 21, see the rejection of claim 1.

Regarding claim 21, Rockinger, Heinzel and Elyakim do not disclose a system wherein the closing hook comprises a lubricating channel expiring on a contact surface adjacent to a king pin.

Schneider discloses a closing hook (18) with a lubricating channel (channel in 18 through which 20 passes) expiring on a contact surface (top horizontal surface on 18 as seen in figure 3) adjacent to a king pin (14). *It is noted that in ex parte Hadsel (PO BdApp) 109 USPQ, the court held that "adjacent" does not require absolute contact, but requires relatively close position.*

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a lubricating channel which exits a surface of the closing hook of Rockinger in view of the teachings of Schneider that such a design would permit lubricant to pass through the closing hook and eventually reach and lubricate the contact surfaces of king pin (see abstract).

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERRY CHAU whose telephone number is (571) 270-5926. The examiner can normally be reached on Monday-Friday 9:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Le can be reached on (571)272-7092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TERRY CHAU/
Examiner, Art Unit 3655

/David D. Le/
Supervisory Patent Examiner, Art Unit 3655
01/03/2011